Quick Reads From NSF.gov

October 26, 2018

01

The Nobel Prizes – The NSF Connection

Public support of science is an investment in the future. The long list of NSF-funded Nobelists proves the wisdom of a public that dares to invest in curiosity, and in a better future. As stewards of the public trust, NSF and other federal agencies help secure that future by supporting tomorrow's Nobel laureates today. Some 236 laureates have been supported by the public through grants from NSF. Read about the past heroes of science and their achievements in this NSF Special Report.

02

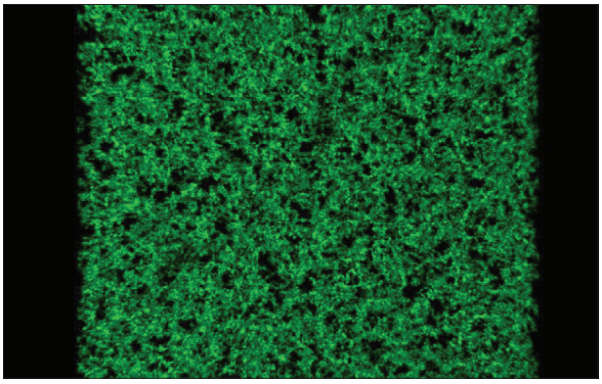
Sustainable Agriculture: Engineering a win-win solution for poultry litter

Lee Blaney's lab at the University of Maryland, Baltimore County, smells somewhat like a barnyard and with good reason. With support from NSF, the environmental engineer and his team are extracting nutrients from poultry litter to create a new revenue stream for farmers and help the environment at the same time. Watch and learn more in this NSF "Science Nation" video.

03

Biomaterials with 'Frankenstein proteins' help heal tissue

Biomedical engineers from Duke University and Washington University in St. Louis have demonstrated that, by injecting an elastic biomaterial made from ordered and disordered proteins, a scaffold can form that responds to temperature and easily integrates into tissue. Read the full story in this NSF News From the Field item.



04

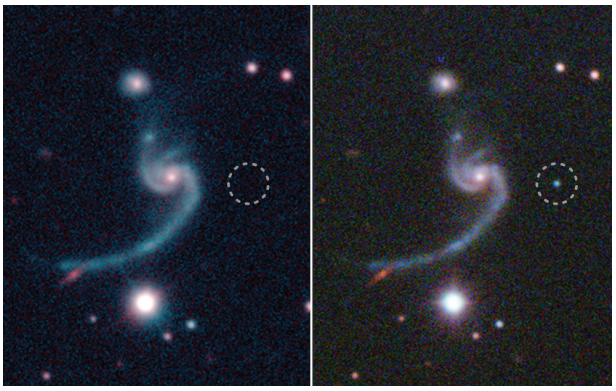
Better coordination networks to strengthen interdependent infrastructure resilience

After hurricanes Harvey and Irma, NSF funded research to investigate the broad impacts of these disasters. A year later, some of the researchers funded by awards from the agency's Social, Behavioral, and Economic Sciences Directorate are reporting results. Find out more about how and why Houston experienced infrastructure failures after Hurricane Harvey in this NSF Discovery story.

05

Little supernova is big discovery: The origin of binary neutron stars

An international research team discovered the first recorded "ult a-stripped supernova," a rare, faint type of supernova that is believed to play a role in the formation of binary neutron star systems. These findings will ad ance the understanding of a wide variety of topics ranging from gravitational waves to the origin of precious metals like gold and platinum. Read the full story in this NSF News From the Field item.



06

NSF announces $24.2 million to support research fueling smart cities and communities

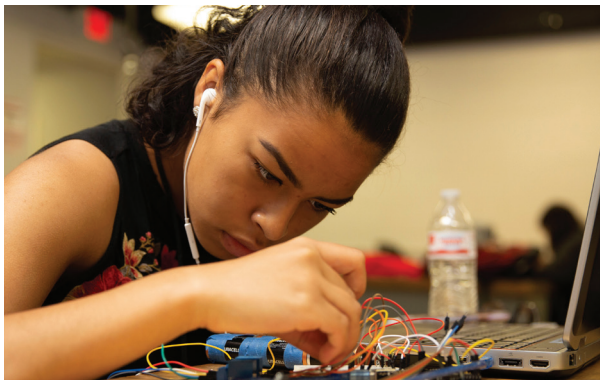
NSF announced Smart and Connected Communities awards, supporting 13 projects involving researchers at 35 institutions nationwide.

"The Smart and Connected Communities program continues to generate innovative and collaborative research applications that are addressing challenges faced by our local communities and cities and are offering solutions to help improve people's lives," said Jim Kurose, NSF's assistant director for Computer and Information Science and Engineering. "As part of our broader portfolio of investments in local communities, the NSF-WINS challenges have tapped into the creativity of teams across the country who do not typically apply to NSF to come up with solutions to the pressing challenges of internet connectivity." Learn more about Smart and Connected Communities and NSF's impacts in this NSF news release.

07

NSF launches pilot for national high school engineering course

NSF has funded a pilot to prepare a curriculum and teachers across the U.S. for a nationwide precollege course on engineering principles and design. The three-year, $4-million pilot marks an important milestone in the creation of a nationally recognized high school engineering course intended to lead to widely accepted, transferrable credit at the college level. Find out more about this pilot program in this NSF news release.



08

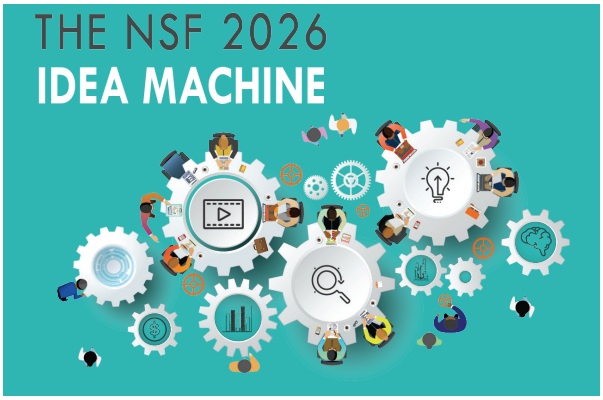
More wet and dry weather extremes projected with global warming

Global warming is projected to spawn more extreme wet and dry weather around the world, according to a Rutgers University-led study. Those extremes include more frequent dry spells in the Northwestern, Central and Southern United States and in Mexico, and more frequent heavy rainfall events in South Asia, the Indochinese Peninsula and southern China. Read the full story and learn more in this NSF News From the Field item.

09

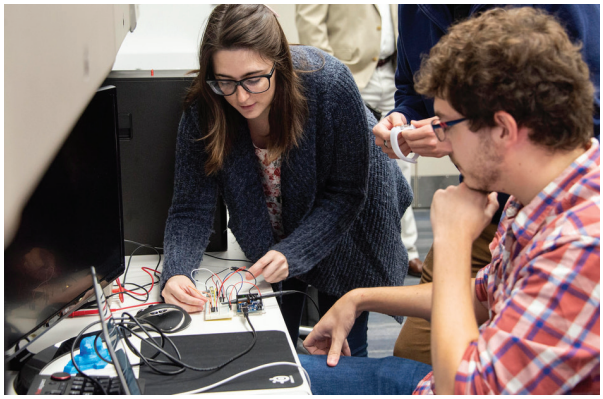
NSF Prize Competitions

NSF welcomes members of the public to help solve science, technology, engineering and math challenges by submitting ideas and solutions for a chance to win prizes. For more information on federal government competitions, please visit challenge.gov. Learn more about NSF's various competitions such as The NSF 2026 Idea Machine and NSF's Visualization Challenge in this NSF Special Report.



10

NSF announces $78.2 million to support frontiers of cybersecurity, privacy research



NSF's Secure and Trustworthy Cyberspace (SaTC) program announces new support for a diverse, $78.2 million portfolio of more than 225 new projects in 32 states spanning a broad range of research and education topics, including artificial intelli ence, cryptography, network security, privacy and usability. "NSF's investments in SaTC are advancing knowledge to protect cyber systems from malicious behavior, while preserving privacy and promoting usability," said Jim Kurose, NSF assistant director for Computer and Information Science and Engineering. "Our goal is to identify fundamentally new ways to design, build and operate secure cyber systems at both the systems and application levels; protect critical infrastructure; and motivate and educate individuals about security and privacy." Learn more in this NSF Discovery story.

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